

**Ohio Department of Transportation
Office of Traffic Engineering
January 21, 2011**

To Holders of the Sign Design Manual (SDM):

As of January 21, 2011, the Sign Design Manual (SDM), Section 295-2 of the TEM, has been revised. This revision involves changes in the Warning and Temporary Traffic Control (TTC) portions of the SDM, and in Appendix C. Basically, three Warning Signs have been deleted, the TTC index has been updated, and various editorial updates and corrections have been made in Appendix C.

The updated publication and the separate SDM revision package are available from the links below, the ODOT Design Reference Resource Center (<http://www.dot.state.oh.us/drrc/Pages/default.aspx>), or from the Office of Traffic Engineering's SDM website at

<http://www.dot.state.oh.us/Divisions/HighwayOps/Traffic/publications2/SDM/Pages/default.aspx>

The revision package includes a detailed Revision Log.

The SDM Revision package is set up to print double-sided sheets.

Per ODOT policy, revisions will only be available via the web pages noted above.

For questions, comments, or concerns please contact either:

| | | |
|---------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------|
| Juanita Elliott, P.E., Traffic Standards Engineer | or | Lisa McConnell, Traffic Standards Technician |
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<http://www.dot.state.oh.us/Divisions/HighwayOps/Traffic/publications2/SDM/Pages/default.aspx>

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**Sign Design Manual (SDM) Revision Log
(TEM Section 295-2)
January 21, 2011 Revision**

The following is a detailed list of the changes made in the Sign Design Manual (SDM) with this January 21, 2011 Revision:

| | | |
|------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| “What’s New” Page | Traffic Home Page | Preface Materials (Cover sheet, Table of Contents and General Introduction) |
| Regulatory Signs | Warning Signs | Guide Signs |
| Emergency Management Signs | Object Markers | School Area Signs |
| Temporary Traffic Control Signs | Appendix A, Symbols | Appendix B, Design Information |
| Appendix C, Ohio's Freeway & Expressway GS Design Method | Appendix D, Standard Highway Signs Alphabet | Appendix E, reserved for future use |
| Appendix F, Pavement Markings Alphabet and Symbols | | |

| Code No. | Sign Legend or Description | Revision Type * | Revision Description / Comment |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------|------------------------------------------------------------|
| * Change - change in a standard, new information, more than simple editorial change; Deletion - deleting a sign design; Editorial - correcting a simple typing or drawing mistake, simple editorial changes such as rephrasing a statement or making a format change. | | | |
| Preface materials [top of page] | | | |
| | Title page | Editorial | Updated per this revision. |
| Regulatory Signs [top of page] | | | |
| Warning Signs [top of page] | | | |
| | Index | Editorial | Updated per this revision. |
| W20-H10 | ALL TRUCKS USE LEFT (RIGHT) LANE | Deletion | Eliminated this design. The R4-5 should be used. |
| W20-H11 | ALL TRUCKS LEFT (RIGHT) __ LANES | Deletion | Eliminated this design. A new design, R4-H5a is available. |
| W20-H12 | RIGHT (LEFT) LANE MUST USE SHOULDER | Deletion | Eliminated this design. |
| Guide Signs - Directional [top of page] | | | |
| Guide Signs - Information [top of page] | | | |
| Guide Signs - Logo [top of page] | | | |
| Guide Signs - Markers [top of page] | | | |
| Guide Signs - Miscellaneous [top of page] | | | |
| Guide Signs – Recreation & Cultural Interest [top of page] | | | |
| Guide Signs – TODS [top of page] | | | |
| Emergency Management Signs [top of page] | | | |
| Object Markers & End of Road Signs [top of page] | | | |

| Code No. | Sign Legend or Description | Revision Type * | Revision Description / Comment |
|----------------------------------------------------------------------|------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------|
| School Area Signs [top of page] | | | |
| Temporary Traffic Control Signs [top of page] | | | |
| | Index | Editorial | Updated. |
| SDM Appendices [top of page] | | | |
| | Appendix C, Ohio's Freeway & Expressway Guide Sign Design Method | | The following revisions have been made: |
| Page 1.1 | Section 1 – Introduction | Editorial | Reprinted as part of the revision package. |
| 1.2 | Table 1-1, Signing Levels | Change | Eliminated Memorial Highway Signs row; E8-H5 sign has been discontinued. |
| 3.7 | Cardinal Direction and Word Message Sizes | Editorial | Made minor editorial correction in ** note. |
| 3.8 | | -- | Reprinted as part of the revision package. |
| 8.9 | | -- | Reprinted as part of the revision package. |
| 8.10 | Typical Sign Widths for 12' Wide Lines | Editorial | Made minor editorial correction in table's title. |
| 11.1 | -- | -- | Reprinted as part of the revision package. |
| 11.2 | Element Spacings | Editorial | Made minor editorial correction in third paragraph and item 4. |
| 11.13 | | -- | Reprinted as part of the revision package. |
| 11.14 | Example Sign Layout 1 (Continued) | Editorial | Corrected page number reference in fourth paragraph. |

SIGN DESIGN MANUAL

SECTION 295-2 of the Traffic Engineering Manual



January 21, 2011 Revision

**Ohio Department of Transportation
Office of Traffic Engineering**

**Ohio Department of Transportation
Office of Traffic Engineering
1980 W. Broad St.
P.O. Box 899
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Web addresses:

ODOT: <http://www.dot.state.oh.us/pages/home.aspx>

Office of Traffic Engineering (OTE):
<http://www.dot.state.oh.us/Divisions/HighwayOps/Traffic/Pages/OTEHomePage.aspx>

ODOT Publications (Design Reference Resource Center):
<http://www.dot.state.oh.us/drrc/Pages/default.aspx>

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An Equal Opportunity Employer

Chapter 3

WARNING SIGNS

(“W” sign code numbers)

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WARNING SIGNS

INDEX

| <u>CODE NO.</u> | <u>LEGEND OR TITLE and notes</u> An * indicates that we're using a copy of the design in the federal SHS manual until the new drawing using the SDM format is available. | <u>DATE</u> * Pen & Ink Revs. |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W1-1 | Right (Left) Turn | 4/15/05 |
| W1-1a | Right (Left) Turn with speed advisory | 1/20/06 |
| W1-2 | Right (Left) Curve | 1/18/08 |
| W1-2a | Right (Left) Curve with speed advisory | 1/18/08 |
| W1-3 | Right (Left) Reverse Turn | 4/21/06 |
| W1-4 | Right (Left) Reverse Curve | 1/18/08 |
| W1-4b | Two Lane Reverse Curve | 1/20/06 |
| W1-4c | Three Lane Reverse Curve | 1/20/06 |
| W1-H4p | ALL LANES THRU | 4/21/06 |
| W1-5 | Right (Left) Winding Road | 4/21/06 |
| W1-6 | Large Arrow | 4/21/06 |
| W1-H6p | ____ MPH | 4/21/06 |
| W1-7 | Large Double Arrow | 4/21/06 |
| W1-8 | Chevron Alignment Sign | 1/21/05 |
| W1-10 | Curve with Side Road | 1/21/05 |
| W1-11 | 180° Curve | 1/20/06 |
| W1-H11 | Construction Arrow Symbol Sign | 1/21/05 |
| W1-13 | Truck Rollover Symbol Sign | 4/15/05 |
| W1-15 | 270° Curve | 1/20/06 |
| W2-1 | Cross Road | 4/21/06 |
| W2-2 | Side Road | 4/15/05 |
| W2-3 | Side Road (45E) | 4/15/05 |
| W2-4 | T Intersection | 4/21/06 |
| W2-5 | Y Intersection | 4/21/06 |
| W2-6 | Circular Intersection | 1/20/06 |
| W3-1 | Stop Ahead Symbol Sign | 1/20/06 |
| W3-1a | STOP AHEAD | 1/20/06 |
| W3-2 | Yield Ahead Symbol Sign * | 1/20/06 |
| W3-2a | YIELD AHEAD * | 1/20/06 |

Sign Design Manual (TEM 295-2)

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W3-3 | Signal Ahead Symbol Sign | 1/21/05 |
| W3-3a | SIGNAL AHEAD | 1/20/06 |
| W3-H3p | NEW SIGNAL | 1/21/05 |
| W3-4 | BE PREPARED TO STOP | 4/15/05 |
| W3-5 | Speed Zone Ahead Symbol Sign | 1/20/06 |
| W3-5a | X MPH SPEED ZONE AHEAD | 1/20/06 |
| W3-6 | DRAWBRIDGE AHEAD | 1/20/06 |
| W3-H6 | PREPARE TO STOP WHEN FLASHING | 4/15/05 |
| W3-H7 | WATCH FOR STOPPED TRAFFIC | 4/21/06 |
| W3-H8 | WATCH FOR SLOWING VEHICLES | 4/21/06 |
| W3-H9 | SIGNAL OPERATION CHANGED (advance version) | 4/21/06 |
| W3-H10 | SIGNAL OPERATION CHANGED (overhead version) | 4/21/06 |
| W3-H11 | (Symbol) / NEW SIGNAL WILL BEGIN STOP-AND-GO / (date) | 7/21/06 |
| W3-H12 | SIGNAL UNDER STUDY FOR REMOVAL... | 1/20/06 |
| W3-H13 | SIGNAL WILL BE REMOVED _____ | 1/20/06 |
| W3-H14 | RAMP METERED WHEN FLASHING | 10/19/07 |
| W3-H15 | WATCH FOR BUSES ON SHOULDER | 1/18/08 |
| W3-H16 | Bus Shoulder Obstruction Symbol | 1/15/10 |
| W4-1 | Merge Symbol Sign | 4/15/05 |
| W4-H1 | Merge of Two Major Facilities | 1/18/08 |
| W4-2 | Lane Reduction Symbol Sign * | 1/20/06 |
| W4-3 | Added Lane Symbol Sign | 4/21/06 |
| W4-4a | TRAFFIC FROM LEFT DOES NOT STOP | 1/18/08 |
| W4-4b | ONCOMING TRAFFIC DOES NOT STOP | 1/18/08 |
| W4-4p | CROSS TRAFFIC DOES NOT STOP | 1/18/08 |
| W4-5 | Entering Roadway Merge Symbol Sign | 1/20/06 |
| W4-6 | Entering Roadway Added Lane Symbol Sign | 1/20/06 |
| W4-7 | THRU TRAFFIC MERGE LEFT (RIGHT) | 4/15/05 |
| W5-1 | ROAD NARROWS | 4/15/05 |
| W5-2 | NARROW BRIDGE | 4/21/06 |
| W5-3 | ONE LANE BRIDGE | 4/21/06 |

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|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| W5-4 | RAMP NARROWS | 4/15/05 |
| W5-4a | BIKEWAY NARROWS | 4/21/06 |
| W5-H5 | NARROW SHOULDER | 4/21/06 |
| W5-H6p | SHOULDER NARROWS | 4/21/06 |
| W5-H8 | GRATED BRIDGE DECK | 4/21/06 |
| W6-1 | Divided Highway Symbol Sign | 4/21/06 |
| W6-1a | DIVIDED HIGHWAY | 1/20/06 |
| W6-1b | DIVIDED ROAD | 1/20/06 |
| W6-2 | Divided Highway Ends Symbol Sign | 4/21/06 |
| W6-2a | DIVIDED HIGHWAY ENDS | 1/20/06 |
| W6-2b | DIVIDED ROAD ENDS | 1/20/06 |
| W6-3 | Two-Way Traffic Symbol Sign | 4/15/05 |
| W6-H3a | TWO WAY OPERATION ENDS / __ MILE(S) | 4/21/06 |
| W6-H3b | SINGLE LANE | 10/19/07 |
| W6-4 | Opposing Traffic Lane Divider | 1/20/06 |
| W7-1 | Hill Symbol Sign | 4/21/06 |
| W7-1a | HILL | 1/20/06 |
| W7-1b | Hill Symbol Sign with Grade Percent | 4/21/06 |
| W7-2 | USE LOW GEAR | 1/20/06 |
| W7-2b | TRUCKS USE LOWER GEAR | 1/20/06 |
| W7-3 | ___ % GRADE * | 10/19/07 |
| W7-3a | NEXT ___ MILES | 10/19/07 |
| W7-3b | _____ % GRADE _____ MILES * | 10/19/07 |
| W7-4 | RUNAWAY TRUCK RAMP 1 MILE | 1/20/06 |
| W7-4b | RUNAWAY TRUCK RAMP | 1/20/06 |
| W7-4c | TRUCK ESCAPE RAMP | 7/17/09 |
| W7-4d | SAND | 1/20/06 |
| W7-4e | GRAVEL | 1/20/06 |
| W7-4f | PAVED | 1/20/06 |
| W7-5 | Bicycle Hill Symbol Sign | 1/20/06 |
| W7-5a | HILL | 1/20/06 |
| W7-6 | HILL BLOCKS VIEW | 1/20/06 |

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W8-1 | BUMP | 4/21/06 |
| W8-2 | DIP | 4/21/06 |
| W8-3 | PAVEMENT ENDS | 1/20/06 |
| W8-4 | SOFT SHOULDER | 1/20/06 |
| W8-5 | Slippery When Wet Symbol Sign | 4/21/06 |
| W8-6 | TRUCK CROSSING | 1/20/06 |
| W8-7 | LOOSE GRAVEL | 1/18/08 |
| W8-8 | ROUGH ROAD | 4/21/06 |
| W8-9 | LOW SHOULDER | 4/21/06 |
| W8-9a | SHOULDER DROP OFF | 1/20/06 |
| W8-10 | Bicycle Slippery When Wet Symbol Sign | 1/18/08 |
| W8-10a | SLIPPERY WHEN WET Plaque | 1/18/08 |
| W8-11 | UNEVEN LANES | 4/21/06 |
| W8-H12 | NO CENTER LINE | 4/21/06 |
| W8-H12a | NO EDGE LINES | 1/20/06 |
| W8-13 | BRIDGE ICES BEFORE ROAD * | 1/20/06 |
| W8-H15 | GROOVED PAVEMENT | 4/21/06 |
| W8-H16 | RUMBLE STRIPS | 7/21/06 |
| W8-H17 | HIGH WATER | 7/21/06 |
| W8-H18 | FOG AREA | 7/21/06 |
| W8-H19 | FALLING ROCK | 7/21/06 |
| W8-H20 | LAND SLIDES | 4/21/06 |
| W8-H21 | ROCK SLIDES | 4/21/06 |
| W8-H23 | ROAD SUBJECT TO FLOODING | 10/19/07 |
| W9-1 | LEFT (RIGHT) LANE ENDS | 4/21/06 |
| W9-2 | LANE ENDS MERGE LEFT (RIGHT) | 4/15/05 |
| W9-3 | LEFT/CENTER/RIGHT LANE CLOSED AHEAD | 1/20/06 |
| W9-3a | Center Lane Closed Symbol * | 1/20/06 |
| W9-H3b | CENTER LANE CLOSED | 4/21/06 |
| W9-H4L | LEFT LANE ENDS / MERGE RIGHT | 4/21/06 |
| W9-H4R | RIGHT LANE ENDS / MERGE LEFT | 4/21/06 |
| W9-H5L | LEFT LANE(S) ENDS / (Distance) | 10/19/07 |

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| W9-H5R | RIGHT LANE(S) ENDS / (Distance) | 10/19/07 |
| W9-H6 | FREEWAY ENDS __ MILE | 7/16/04 |
| W9-H7 | EXPRESSWAY ENDS __ MILE | 7/21/06 |
| W10-1 | Railroad Crossing | 4/21/06 |
| W10-1a | EXEMPT | 1/20/06 |
| W10-2 | Crossroad with Parallel Tracks Symbol Sign | 4/21/06 |
| W10-3 | Side Road with Parallel Tracks Symbol Sign | 4/21/06 |
| W10-4 | T Intersection with Parallel Tracks Symbol Sign | 4/21/06 |
| W10-5 | Low Ground Clearance Highway- Rail Grade Crossing Symbol * | 1/20/06 |
| W10-7 | Light Rail symbol | 1/20/06 |
| W10-8 | TRAINS MAY EXCEED 80 MPH | 7/21/06 |
| W10-9 | NO TRAIN HORN | 1/20/06 |
| W10-10 | NO SIGNAL | 1/20/06 |
| W10-11 | Storage Space symbol | 1/20/06 |
| W10-11a | 100 FEET BETWEEN TRACKS & HIGHWAY | 1/20/06 |
| W10-11b | 100 FEET BETWEEN HIGHWAY & TRACKS BEHIND YOU | 1/20/06 |
| W10-12 | Skewed Tracks symbol | 1/20/06 |
| W10-13 | NO GATES OR LIGHTS | 1/20/06 |
| W10-14 | NEXT CROSSING | 1/20/06 |
| W10-14a | USE NEXT CROSSING | 1/20/06 |
| W10-15 | ROUGH CROSSING | 1/20/06 |
| W11-1 | Bicycle Crossing Symbol Sign | 4/21/06 |
| W11-H1a | BIKES USING ROADWAY AHEAD | 7/21/06 |
| W11-2 | Pedestrian Crossing Symbol Sign * | 4/16/04 |
| W11-H2a | PEDESTRIANS USING ROADWAY | 7/21/06 |
| W11-3 | Deer Crossing Symbol Sign | 4/21/06 |
| W11-4 | Cattle Crossing Symbol Sign | 4/21/06 |
| W11-5 | Farm Machinery Crossing Symbol Sign | 4/21/06 |
| W11-5a | Farm Machinery Crossing Symbol Sign (alternate) * | 4/16/04 |
| W11-H5ap | FARM MACHINERY Plaque | 4/21/06 |
| W11-6 | Snowmobile Crossing Symbol Sign | 4/21/06 |

Sign Design Manual (TEM 295-2)

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W11-7 | Equestrian Crossing Symbol Sign | 4/21/06 |
| W11-8 | Fire Station Symbol Sign | 4/21/06 |
| W11-9 | Handicapped Crossing Symbol Sign * | 4/16/04 |
| W11-10 | Truck Crossing Symbol Sign | 4/21/06 |
| W11-11 | Golf Cart Symbol Sign | 1/20/06 |
| W11-H12p | EMERGENCY SIGNAL AHEAD | 1/20/06 |
| W11-H13 | _____ ENTRANCE | 7/21/06 |
| W11-14 | Horse and Buggy Traffic Symbol Sign * | 1/20/06 |
| W11-H14a | (Buggy symbol) USING ROADWAY AHEAD | 4/21/06 |
| W11-H15 | SAFETY ZONE | 4/21/06 |
| W12-1 | Double Arrow | 4/21/06 |
| W12-2 | Low Clearance Symbol Sign | 4/21/06 |
| W12-2p | Center Low Clearance | 4/21/06 |
| W12-H3 | Side Low Clearance / (arrow) | 4/21/06 |
| W13-1 | Speed Advisory Plate | 4/21/06 |
| W13-2 | EXIT __ MPH | 1/20/06 |
| W13-3 | RAMP __ MPH | 1/20/06 |
| W13-4 | ON RAMP | 4/21/06 |
| W13-5 | CURVE _ MPH | 1/20/06 |
| W13-H6 | EXIT (RAMP) __ MPH / (arrow) | 1/18/08 |
| W13-H7 | NO REENTRY ____ BOUND | 7/21/06 |
| W13-H8 | NO REENTRY ____ BOUND (2-line message) | 7/21/06 |
| W14-1 | DEAD END | 1/20/06 |
| W14-2 | NO OUTLET | 1/20/06 |
| W14-1a | Dead End Plaque * | 4/21/06 |
| W14-2a | No Outlet Plaque * | 4/21/06 |
| W14-3 | NO PASSING ZONE Pennant Sign | 4/21/06 |
| W15-1 | Playground Symbol Sign | 4/21/06 |
| W16-1 | SHARE THE ROAD | 4/21/06 |
| W16-2 | Distance Plaque (2 lines) * | 1/20/06 |
| W16-2a | Distance Plaque (1 line) * | 1/20/06 |
| W16-3 | Distance Plaque (2 lines) * | 1/20/06 |

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| W16-3a | Distance Plaque (1 line) * | 1/20/06 |
| W16-4 | NEXT __ FT * | 1/20/06 |
| W16-5p | Arrow Plaque * | 1/20/06 |
| W16-6p | Advance Arrow Plaque * | 1/20/06 |
| W16-7p | Supplemental Diagonal Arrow | 1/18/08 |
| W16-8 | Advance Street Name | 1/18/08 |
| W16-H8 | Street Name | 1/15/10 |
| W16-8a | Advance Street Name plaque * | 1/20/06 |
| W16-H8a | Two Street Names | 1/15/10 |
| W16-9p | AHEAD | 1/18/08 |
| W16-10 | PHOTO ENFORCED * | 1/20/06 |
| W16-11 | HOV | 1/20/06 |
| W16-12p | TRAFFIC CIRCLE * | 1/20/06 |
| W16-13 | WHEN FLASHING * | 1/20/06 |
| W17-1 | SPEED HUMP * | 1/20/06 |
| W18-1 | NO TRAFFIC SIGNS | 1/20/06 |
| W20-1 | ROAD WORK AHEAD | 4/21/06 |
| W20-2 | DETOUR AHEAD | 4/21/06 |
| W20-3 | ROAD CLOSED AHEAD | 4/21/06 |
| W20-4 | ONE LANE ROAD AHEAD | 4/21/06 |
| W20-5 | RIGHT (CENTER/LEFT) LANE CLOSED AHEAD | 4/21/06 |
| W20-5a | RIGHT (LEFT) __ LANES CLOSED AHEAD | 7/21/06 |
| W20-7 | FLAGGER AHEAD | 7/21/06 |
| W20-7a | Flagger Symbol Sign | 7/21/06 |
| W20-H8 | WORK IN EXIT LANE | 1/18/08 |
| W20-H13 | Impending Closure Sign with phone number | 7/21/06 |
| W20-H14 | Impending Closure Sign with agency name | 7/21/06 |
| W20-H15 | Exit Closed | 7/17/09 |
| W20-H15a | CLOSED | 1/15/10 |
| W20-H16 | STATE ROUTE CLOSED | 7/17/09 |
| W21-1 | WORKERS | 4/21/06 |
| W21-1a | Worker Symbol Sign | 4/21/06 |

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| W21-2 | FRESH OIL (TAR) | 1/18/08 |
| W21-3 | ROAD MACHINERY AHEAD | 4/21/06 |
| W21-5 | SHOULDER WORK | 1/20/06 |
| W21-H5 | SHOULDER WORK AHEAD | 7/21/06 |
| W21-5a | RIGHT/LEFT SHOULDER CLOSED | 1/20/06 |
| W21-5b | RIGHT/LEFT SHOULDER CLOSED AHEAD * | 1/20/06 |
| W21-6 | SURVEY CREW | 1/20/06 |
| W21-H6 | SURVEY CREW AHEAD | 7/21/06 |
| W21-7 | UTILITY WORK AHEAD | 1/20/06 |
| W21-H8 | MOWING AHEAD | 7/21/06 |
| W22-1 | BLASTING ZONE AHEAD | 1/20/06 |
| W22-2 | TURN OFF 2-WAY RADIO AND PHONE * | 4/16/04 |
| W22-3 | END BLASTING ZONE | 4/21/06 |
| W23-1 | SLOW TRAFFIC AHEAD | 1/20/06 |
| W23-H2 | NO MERGE AREA | 4/16/04 * |
| W24-1 | Single Lane Shift | 1/20/06 |
| W24-H1 | WET PAINT / (arrow) (vehicle-mounted sign) | 1/18/08 |
| W24-1a | Double Lane Shift | 1/20/06 |
| W24-1b | Triple Lane Shift | 1/20/06 |
| W24-H2 | WET PAINT / (arrows) (vehicle-mounted sign) | 1/18/08 |
| W24-H3 | WET PAINT (vehicle-mounted sign) | 7/21/06 |
| W24-H5 | OVERSIZE LOAD (vehicle-mounted sign) | 7/21/06 |
| W24-H6 | SURVEY VEHICLE (vehicle-mounted sign) | 7/21/06 |
| W24-H7 | FREQUENT STOPS (vehicle-mounted sign) | 7/21/06 |
| W24-H8 | SLOW TRUCK AHEAD (vehicle-mounted sign) | 7/21/06 |
| W24-H9 | SLOW TRACTOR AHEAD (vehicle-mounted sign) | 7/21/06 |
| W24-H10 | CENTERLINE TRUCK AHEAD | 7/21/06 |
| W24-H11 | EDGE LINE PAINTING 1500 FT | 7/17/09 |
| W24-H12 | LANE LINE PAINTING 1500 FT | 7/17/09 |
| W24-H13 | CENTER LINE PAINTING 1500 FT | 7/17/09 |
| W25-1 | ONCOMING TRAFFIC HAS EXTENDED GREEN | 1/20/06 |

Sign Design Manual (TEM 295-2)

| <u>CODE NO.</u> | <u>LEGEND OR TITLE and notes</u> An * indicates that we're using a copy of the design in the federal SHS manual until the new drawing using the SDM format is available. | <u>DATE</u> * Pen & Ink Revs. |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| W25-2 | ONCOMING TRAFFIC MAY HAVE EXTENDED GREEN | 1/20/06 |

Intentionally blank.

TEMPORARY TRAFFIC CONTROL SIGNS

INDEX

| <u>Code Numbers</u> | <u>LEGEND OR TITLE and notes</u> This index is intended to serve only as a cross-reference to designs for work zone-related signs located in other chapters of this Sign Design Manual. This is not necessarily an all encompassing list. There may be other signs in other chapters that would be used in certain work zones. |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regulatory Signs | |
| R1-1 | STOP |
| R1-2 | YIELD |
| R1-2a | TO ONCOMING TRAFFIC |
| R2-1 | SPEED LIMIT |
| R2-H2a | VEHICLES OVER 4 TONS EMPTY/NON COM BUSES... |
| R3-2 | No Left Turn Symbol Sign |
| R4-1 | DO NOT PASS |
| R4-2 | PASS WITH CARE |
| R4-3 | SLOWER TRAFFIC KEEP RIGHT |
| R4-5 | TRUCKS USE RIGHT LANE |
| R4-9 | STAY IN LANE |
| R4-H11 | THROUGH TRAFFIC KEEP RIGHT |
| R4-H12 | THROUGH TRAFFIC KEEP LEFT |
| R9-8 | PEDESTRIAN CROSSWALK |
| R9-9 | SIDEWALK CLOSED |
| R9-10 | SIDEWALK CLOSED / (arrow) / USE OTHER SIDE |
| R9-11 | SIDEWALK CLOSED AHEAD / (arrow) / CROSS HERE |
| R9-11a | SIDEWALK CLOSED / (arrow) / CROSS HERE |
| R9-H12 | CROSSWALK CLOSED |
| R9-H13 | CROSSWALK CLOSED / (arrow) / USE OTHER SIDE |
| R10-6 | STOP HERE ON RED (arrow) |
| R10-11 | NO TURN ON (red ball symbol) |
| R11-2 | ROAD CLOSED |
| R11-3 | ROAD CLOSED LOCAL TRAFFIC ONLY |
| R11-3a | ROAD CLOSED ___ MILES AHEAD / LOCAL TRAFFIC ONLY |
| R11-3b | BRIDGE OUT ___ MILES AHEAD / LOCAL TRAFFIC ONLY |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC |
| R11-H5 | CONSTRUCTION ZONE / FINES DOUBLED |
| R11-H5a | Work Zone Increased Penalty Sign |
| R11-H6 | WET PAINT / KEEP OFF |
| R11-H7 | DO NOT PASS (vehicle-mounted sign) |

| | |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Code Numbers</u> | <u>LEGEND OR TITLE and notes</u> This index is intended to serve only as a cross-reference to designs for work zone-related signs located in other chapters of this Sign Design Manual. This is not necessarily an all encompassing list. There may be other signs in other chapters that would be used in certain work zones. |
| R16-H14 | Two Line Distance Plaque |
| Warning Signs | |
| W1-2 | Right (Left) Curve |
| W1-2a | Right (Left) Curve with Speed Advisory |
| W1-4 | Right (Left) Reverse Curve |
| W1-4b | Two Lane Reverse Curve |
| W1-4c | Three Lane Reverse Curve |
| W1-H4p | ALL LANES THRU |
| W1-6 | Large Arrow |
| W1-H6p | __ MPH |
| W1-H6p | __ MPH |
| W1-7 | Large Double Arrow |
| W1-8 | Chevron Alignment Sign |
| W1-11 | 180° Curve |
| W1-H11 | Construction Arrow Symbol Sign |
| W3-1 | Stop Ahead Symbol Sign |
| W3-1a | STOP AHEAD |
| W3-2 | Yield Ahead Symbol Sign |
| W3-2a | YIELD AHEAD |
| W3-3 | Signal Ahead Symbol Sign |
| W3-H3p | NEW SIGNAL |
| W3-4 | BE PREPARED TO STOP |
| W3-5 | Speed Zone Ahead Symbol Sign |
| W3-H6 | PREPARE TO STOP WHEN FLASHING |
| W3-H7 | WATCH FOR STOPPED TRAFFIC |
| W3-H8 | WATCH FOR SLOWING VEHICLES |
| W3-H9 | SIGNAL OPERATION CHANGED (advance version) |
| W3-H10 | SIGNAL OPERATION CHANGED (overhead version) |
| W3-H11 | (Symbol) / NEW SIGNAL WILL BEGIN STOP-AND-GO / (date) |
| W3-H12 | SIGNAL UNDER STUDY FOR REMOVAL... |
| W3-H13 | SIGNAL WILL BE REMOVED _____ |
| W4-1 | Merge Symbol Sign |
| W4-2 | Lane Reduction Symbol Sign |
| W4-3 | Added Lane Symbol Sign |
| W4-7 | THRU TRAFFIC MERGE LEFT (RIGHT) |

| <u>Code Numbers</u> | LEGEND OR TITLE and notes This index is intended to serve only as a cross-reference to designs for work zone-related signs located in other chapters of this Sign Design Manual. This is not necessarily an all encompassing list. There may be other signs in other chapters that would be used in certain work zones. |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| W5-1 | ROAD NARROWS |
| W5-4 | RAMP NARROWS |
| W5-H5 | NARROW SHOULDER |
| W5-H6p | SHOULDER NARROWS |
| W6-3 | Two-Way Traffic Symbol Sign |
| W6-H3a | TWO WAY OPERATION ENDS/ ____ MILE(S) |
| W6-H3b | SINGLE LANE |
| W6-4 | Opposing Traffic Lane Divider |
| W7-3a | NEXT ____ MILES |
| W8-1 | BUMP |
| W8-2 | DIP |
| W8-3 | PAVEMENT ENDS |
| W8-4 | SOFT SHOULDER |
| W8-5 | Slippery When Wet Symbol Sign |
| W8-7 | LOOSE GRAVEL |
| W8-8 | ROUGH ROAD |
| W8-9 | LOW SHOULDER |
| W8-9a | SHOULDER DROP OFF |
| W8-11 | UNEVEN LANES |
| W8-H12 | NO CENTER LINE |
| W8-H12a | NO EDGE LINES |
| W8-H15 | GROOVED PAVEMENT |
| W8-H16 | RUMBLE STRIPS |
| W8-H17 | HIGH WATER |
| W9-1 | LEFT (RIGHT) LANE ENDS |
| W9-2 | LANE ENDS MERGE LEFT (RIGHT) |
| W9-3 | LEFT/CENTER/RIGHT LANE CLOSED AHEAD |
| W9-3a | Center Lane Closed Symbol |
| W9-H3b | CENTER LANE CLOSED |
| W9-H4L | LEFT LANE ENDS / MERGE RIGHT |
| W9-H4R | RIGHT LANE ENDS / MERGE LEFT |
| W9-H5L | LEFT LANE(S) ENDS / (Distance) |
| W9-H5R | RIGHT LANE(S) ENDS / (Distance) |
| W9-H6 | FREEWAY ENDS ____ MILE |
| W11-10 | Truck Crossing Symbol Sign |

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| W11-H13 | ____ ENTRANCE |
| W12-1 | Double Arrow |
| W13-1 | Advisory Speed Plaque |
| W13-4 | ON RAMP |
| W13-H6 | EXIT (RAMP) / ____ MPH / (arrow) |
| W16-2 | Distance Plaque (2 lines) (FEET) |
| W16-2a | Distance Plaque (1 line) (FT) |
| W16-3 | Distance Plaque (2 lines) (MILES) |
| W16-3a | Distance Plaque (1 line) (MILES) |
| W16-4 | NEXT ____ FT |
| W16-7p | Supplemental Diagonal Arrow |
| W16-8 | Advance Street (or Road) Name |
| W16-9p | AHEAD |
| W20-1 | ROAD WORK AHEAD |
| W20-2 | DETOUR AHEAD |
| W20-3 | ROAD CLOSED AHEAD |
| W20-4 | ONE LANE ROAD AHEAD |
| W20-5 | RIGHT (CENTER/LEFT) LANE CLOSED AHEAD |
| W20-5a | RIGHT (LEFT) ____ LANES CLOSED AHEAD |
| W20-7 | FLAGGER AHEAD |
| W20-7a | Flagger Symbol Sign |
| W20-H8 | WORK IN EXIT LANE |
| W20-H13 | Impending Closure Sign with phone number |
| W20-H14 | Impending Closure Sign with agency name |
| W21-1 | WORKERS |
| W21-1a | Workers Symbol Sign |
| W21-2 | FRESH OIL (TAR) |
| W21-3 | ROAD MACHINERY AHEAD |
| W21-5 | SHOULDER WORK |
| W21-H5 | SHOULDER WORK AHEAD |
| W21-5a | RIGHT/LEFT SHOULDER CLOSED |
| W21-5b | RIGHT/LEFT SHOULDER CLOSED AHEAD |
| W21-6 | SURVEY CREW |
| W21-H6 | SURVEY CREW AHEAD |
| W21-H8 | MOWING AHEAD |

| <u>Code Numbers</u> | <u>LEGEND OR TITLE and notes</u> This index is intended to serve only as a cross-reference to designs for work zone-related signs located in other chapters of this Sign Design Manual. This is not necessarily an all encompassing list. There may be other signs in other chapters that would be used in certain work zones. |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| W22-1 | BLASTING ZONE AHEAD |
| W22-2 | TURN OFF 2-WAY RADIO AND PHONE |
| W22-3 | END BLASTING ZONE |
| W23-1 | SLOW TRAFFIC AHEAD |
| W23-H2 | NO MERGE AREA |
| W24-1 | Single Lane Shift |
| W24-H1 | WET PAINT / (arrow) (vehicle-mounted sign) |
| W24-1a | Double Lane Shift |
| W24-1b | Triple Lane Shift |
| W24-H1 | WET PAINT / (arrow) (vehicle-mounted sign) |
| W24-H2 | WET PAINT / (arrows) (vehicle-mounted sign) |
| W24-H3 | WET PAINT (vehicle-mounted sign) |
| W24-H5 | OVERSIZE LOAD (vehicle-mounted sign) |
| W24-H6 | SURVEY VEHICLE (vehicle-mounted sign) |
| W24-H7 | FREQUENT STOPS (vehicle-mounted sign) |
| W24-H10 | CENTERLINE TRUCK AHEAD |
| W24-H11 | EDGE LINE PAINTING 1500 FT |
| W24-H12 | LANE LINE PAINTING 1500 FT |
| W24-H13 | CENTER LINE PAINTING 1500 FT |
| Guide Signs – Directional | |
| D3-1 | Street Name |
| D12-H6 | RADIO TRAFFIC INFO 1 MILE |
| D12-H7 | TRAFFIC INFO / TUNE RADIO TO (frequencies) |
| D12-H8 | WHEN FLASHING / TRAFFIC INFO / TUNE RADIO... |
| D12-H9 | END RADIO TRAFFIC INFO |
| Guide Signs - Markers | |
| M4-1a | ALT |
| M4-2 | BYPASS |
| M4-4 | TRUCK |
| M4-5 | TO |
| M4-7 | TEMPORARY |
| M4-8 | DETOUR |
| M4-8a | END DETOUR |
| M4-9 | DETOUR / (horizontal arrow) |
| M4-9a | Pedestrian/Bicycle Detour Symbol Sign |

| <u>Code Numbers</u> | <u>LEGEND OR TITLE and notes</u> This index is intended to serve only as a cross-reference to designs for work zone-related signs located in other chapters of this Sign Design Manual. This is not necessarily an all encompassing list. There may be other signs in other chapters that would be used in certain work zones. |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M4-H9a | PEDESTRIAN DETOUR (arrow) |
| M4-9b | Pedestrian DETOUR |
| M4-9c | Bicycle DETOUR |
| M4-10 | DETOUR Arrow |
| Guide Signs – Miscellaneous | |
| E5-H1b | Narrow Exit Gore Sign |
| E5-H1c | Narrow Exit Gore Sign |
| E5-2 | EXIT OPEN |
| E5-2a | EXIT CLOSED |
| E5-H2b | EXIT OPEN AHEAD |
| E5-H2d | EXIT (arrow) |
| E5-3 | EXIT ONLY |
| G20-1 | ROAD WORK NEXT __ MILES |
| G20-H1a | Number Plate |
| G20-2 | END ROAD WORK |
| G20-4 | PILOT CAR / FOLLOW ME |

SECTION 1 - INTRODUCTION

The purpose of this appendix is to provide information regarding the design and fabrication of designable guide signs. These are guide signs which do not have a standard, uniform size. The height and width of these signs are variable.

The overall size of guide signs on freeways, expressways, ramps and approaches thereto is determined by the size of the sign elements. The element sizes are grouped by the level of signing. The appropriate level of signing is determined from Table 1-1. The appropriate element sizes are shown in Table 1-2.

Each element or element grouping has minimum spacing requirements. The element sizes, when used with the appropriate horizontal and vertical spacings between elements, and edge spacing factors, determine the overall size of the guide sign.

Please note that the letters and numbers shown throughout this appendix are intended to be representative of the alphabets used on designable guide signs, although they are not necessarily identical in appearance to those that would actually be used on a sign. The character set was chosen for its ease of use in CADD drawing in the development of this appendix. The alphabets shown in the example layouts are for illustrative purposes only. The size and shape of the individual letters and numbers will be slightly different on a completed sign. Information regarding the use of alphabets on designable guide signs is contained in Section 2.

Sign Design Manual (TEM 295-2)

| TABLE 1-1 | | | | | |
|-----------------------------------------------------------------------------------------|---------------|------------|-------------|---------------|---------|
| Signing Levels | | | | | |
| Sign Type | Sign Codes | Route Type | | | |
| | | Freeway | Express-way | Major Conv Rd | Conv Rd |
| Ground-Mounted Mainline Major Guide Signs at Interchanges with Freeways and Expressways | E1-H1, E1-H3 | 0 | 0 | – | – |
| Ground-Mounted Mainline Major Guide Signs at Interchanges with Conventional Roads | E1-H1, E1-H3 | 1 | 1 | – | – |
| Overhead-Mounted Mainline Major Guide Signs | E1-H1, E1-H3 | 1 | 1 | – | – |
| Diagrammatic Mainline Major Guide Signs | E4-H1 | 1 | 1 | – | – |
| Pull-Through Signs | E6-H2 | 1 | 1 | – | – |
| Mainline Supplemental Guide Signs | E3-H1, E3-H2 | 2 | 2 | – | – |
| Next Exit Supplemental Advance Guide Signs | E2-H1, E2-H1a | 3 | 3 | – | – |
| Ground-Mounted Guide Signs on Collector-Distributor Roads | E1-H1, E1-H3 | 1 | 1 | – | – |
| Overhead-Mounted Guide Signs on Collector-Distributor Roads | E1-H1, E1-H3 | 2 | 2 | – | – |
| Post-Interchange Distance Signs | E7-H1 | 2* | 2* | – | – |
| Interchange Sequence Signs | E7-H2 | 2* | 2* | – | – |
| Community Interchanges Identification Signs | E7-H3 | 2* | 2* | – | – |
| Next Exits Signs | E7-H4 | 2* | 2* | – | – |
| Ground-Mounted and Overhead-Mounted Freeway and Expressway Entrance Ramp Signs | M2-H6 | – | 3 | 3 | 4 |

* Use Level 3 route shield and cardinal direction sizes.

Cardinal Direction and Word Message Sizes

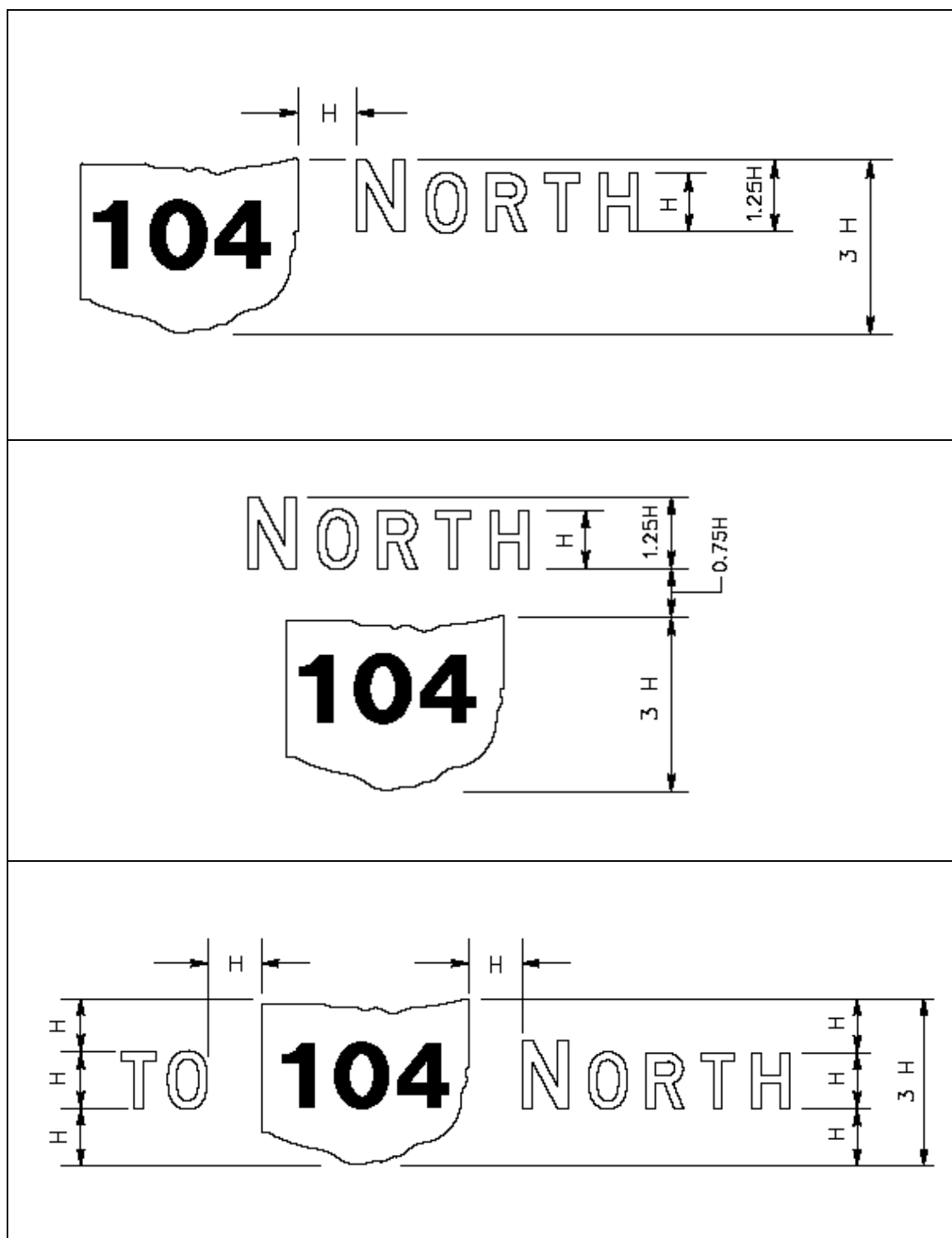
All Dimensions are in inches.

| Cardinal Direction or Word Message | Level 0 | | Levels 1 and 2 | | Levels 3 and 4 | |
|------------------------------------|---------|----------|----------------|----------|----------------|----------|
| | Width* | Height** | Width* | Height** | Width* | Height** |
| NORTH | 81.80 | 20/16 | 61.35 | 15/12 | 40.90 | 10/8 |
| | 81.56 | | 61.17 | | 40.78 | |
| SOUTH | 80.87 | 20/16 | 60.65 | 15/12 | 40.43 | 10/8 |
| | 79.84 | | 59.88 | | 39.92 | |
| EAST | 64.25 | 20/16 | 48.19 | 15/12 | 32.13 | 10/8 |
| | 57.28 | | 42.96 | | 28.64 | |
| WEST | 67.49 | 20/16 | 50.62 | 15/12 | 33.75 | 10/8 |
| | 67.12 | | 50.34 | | 33.56 | |
| TO | 28.30 | 16 | 21.22 | 12 | 14.15 | 8 |
| | 26.88 | | 20.16 | | 13.44 | |
| USE | 45.50 | 16 | 34.12 | 12 | 22.75 | 8 |
| | 41.44 | | 31.08 | | 20.72 | |
| FOLLOW | 95.82 | 16 | 71.86 | 12 | 47.91 | 8 |
| | 95.36 | | 71.52 | | 47.68 | |

* Top number is for FHWA Standard Alphabet Series E. Bottom number is for Clearview 4-W.

**For cardinal directions, first number is height of first letter, second number is height of following letters.

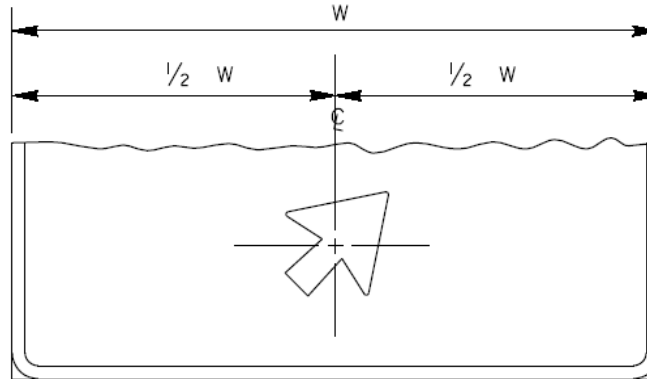
Typical Horizontal and Vertical Spacings



Note: "H" = letter height

Typical Arrow Spacings (Continued)

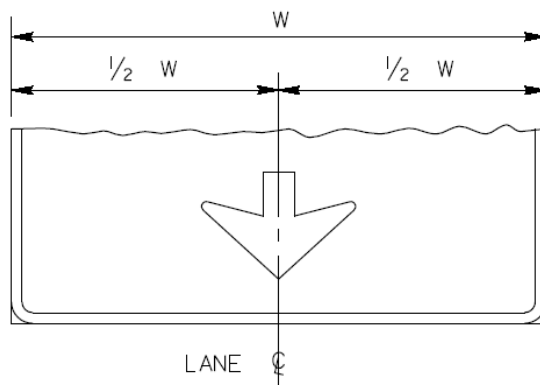
Type B Arrow for Rest Area and Scenic View Signs



Note: This arrow placement is only used on rest area and scenic view signs, and is not used for exit direction signs. For exit direction signs, use a Type A arrow placed on the appropriate side of the sign.

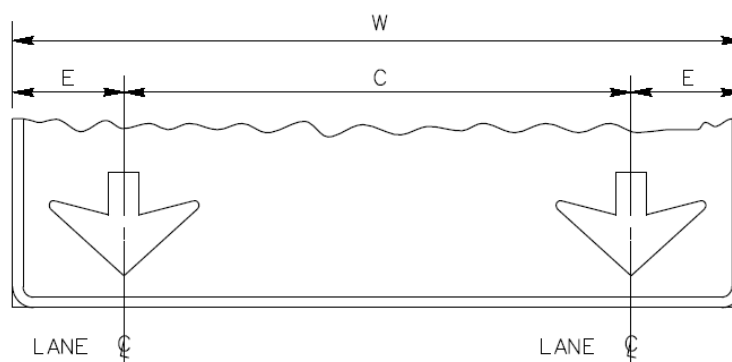
Typical Arrow Spacings (Continued)

Single Type C Arrow



Note: A single Type C arrow is preferable centered at the bottom of the sign as shown. The arrow may be offset from centerline if needed due to geometric considerations, physical restrictions, or other cause.

Two Type C Arrows



Typical Sign Widths for 12' Wide Lanes

| Level of Signing | Minimum Sign Width "W" | Spacing Between Lane Centerlines "C" | Typical Edge Spacing "E" |
|------------------|------------------------|--------------------------------------|--------------------------|
| 1 | 17' – 0" | 144" | 30" |
| 2 | 16' – 0" | 144" | 24" |
| 3 | 16' – 0" | 144" | 24" |
| 4 | 15' – 0" | 144" | 18" |

SECTION 11 - SIGN LAYOUT

The appropriate elements to include on a guide sign should be chosen in accordance with established signing principles. A completed guide sign consists of these selected elements properly arranged and spaced. The size of a guide sign is determined by applying the appropriate elements or groups of elements, with corresponding spacing factors, to the sign. The overall sign dimensions are determined by rounding up to the next whole foot in width and height.

The elements or groups of elements are placed on a guide sign in the following order, from top to bottom (except for certain arrows, which are placed at the side of the sign). Not all elements will be used on every sign.

| Element | Reference Section | Comments |
|-------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Route Shield | 3 | This element consists of one or more route shields (U.S., State, Interstate, Ohio Turnpike, County, Township). Also included are the Hazardous Material Route and Hazardous Material Prohibited signs. Cardinal directions (NORTH, SOUTH, EAST, WEST), and auxiliary word messages (BUSINESS, TRUCK, ALT, BY-PASS, END, TO, USE and FOLLOW), may also be used. The route shield grouping should be arranged in accordance with the provisions in Section 3, and applied as one component at the top of the guide sign. |
| Street Name | 4 | Usually a street name will only be used on a sign without a route shield, but both a route shield and street name may occasionally be used on the same sign. The street name should be placed at the top of the sign, or below the route shield grouping on a sign that contains both components. More than one street name may be used on a guide sign. A street name used with a cardinal direction should be applied to the guide sign as one grouping. |
| Destination | 5 | The destination is positioned below the route shield and/or street name. More than one destination may be used on a guide sign. |
| Distance Message | 6 | The distance message (e.g., EXIT 1 MILE) is placed below the route shield, street name, and/or destination. A distance message and action message are not used on the same sign. |
| Action Message | 7 | The action message (e.g., NEXT RIGHT) is placed below the route shield, street name, and/or destination. An action message and distance message are not used on the same sign. |
| Arrow | 8 | One or more arrows may be used on a sign in accordance with the placement criteria in Section 8. Type A (up) arrows are placed on the appropriate side of the sign. Type B arrows are placed at the bottom of the sign. Type C (down) arrows are placed at the bottom of the sign. Type D (advance turn) arrows can be placed at the side or bottom of a sign. A Type A (up) arrow is not used on the same sign with Type C (down) arrows. |
| EXIT ONLY Message | 9 | When used, the EXIT ONLY message is contained in a black on yellow panel at the bottom of a guide sign, which may also contain one or more Type C (down) arrows. |

Element Spacings

Each element or group of elements to be placed on a guide sign has standard spacings or clearances that are applied to the top, bottom and sides. The spacings are applied to the outer limits of the element or element grouping (except that for lowercase alphabets, the bottom spacing is applied to the baseline of the letters). The proper clearance between adjacent elements or groups of elements is controlled by the greater of the standard spacings of the adjacent elements.

This concept can be visualized by placing a rectangular box around each element or group of elements. The four sides of the box are parallel to the four sides of the sign. The edges of the box are placed at the standard spacing from the element or group of elements contained within. As the elements or groups of elements are placed on the guide sign, the boxes are allowed to overlap each other, but the edge of each box is not allowed to encroach on the adjacent element.

Elements adjacent to a sign edge (top, bottom, sides) are not affected by the border. The standard element spacings are allowed to extend to, but not beyond, the edge of the sign. The borders, as well as the corners, do not affect the element spacings.

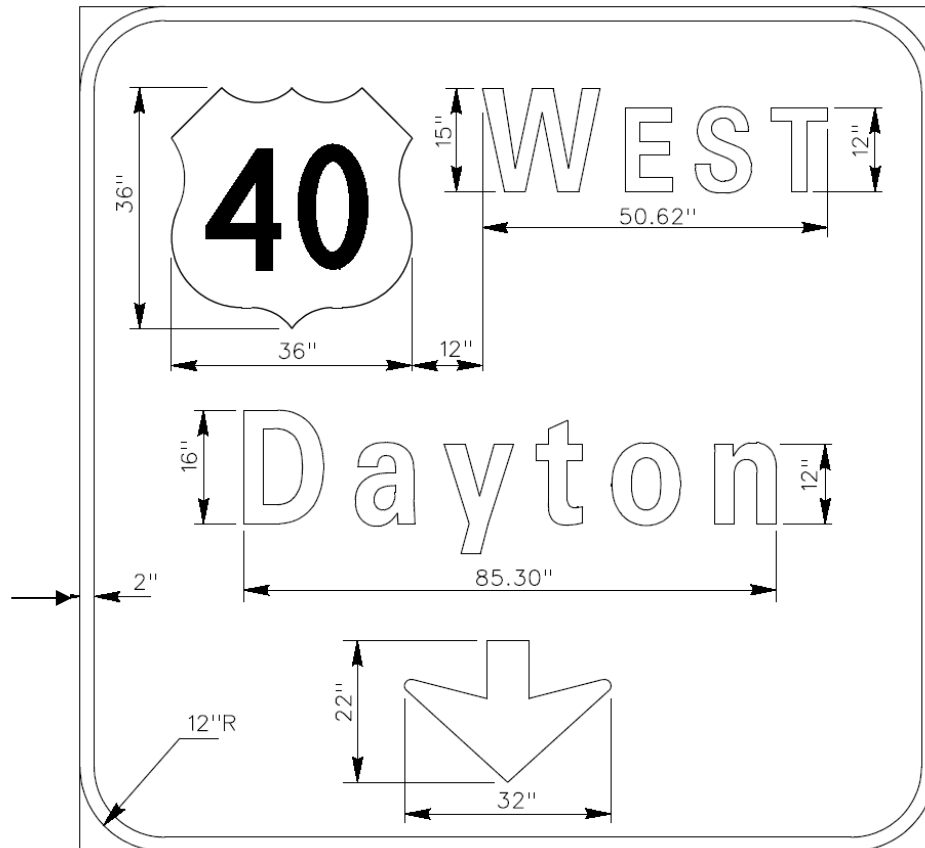
For multi-colored signs, each portion of the sign can be considered as a separate sign. The spacing boxes for elements or groups of elements in one color are not allowed to cross into the adjacent color (see page 11.17).

The following general spacing rules apply, which are described in more detail in the following pages.

1. For route shield groupings, the horizontal spacing is equal to the capital letter height of the cardinal direction or auxiliary word message, regardless of whether a cardinal direction or auxiliary word message is used with the route shield. The vertical spacing is equal to 0.75 times the capital letter height of the cardinal direction. (These factors are applied to the height of the following letters of the cardinal direction; not the height of the first letter of the cardinal direction.) For example, for a level 1 route shield with a height of 36 inches, and a cardinal direction using 12-inch capital letters, the horizontal spacing is 12 inches and the vertical spacing is 9 inches. These spacings are applied to the route shield grouping used on a sign.
2. For text legends, the horizontal spacing (left and right) is generally equal to the upper case or capital letter height. The vertical spacing (above and below) is generally equal to 0.75 times the upper case or capital letter height. For example, for a level 1 upper/lower case legend using 16/12-inch letters, the horizontal spacing is 16 inches and the vertical spacing is 12 inches. For a level 1 action message (e.g., KEEP RIGHT) using 12-inch capital letters, the horizontal spacing is 12 inch and the vertical spacing is 9 inch.
3. For street names that utilize a cardinal direction below, the horizontal spacing is unchanged, and is equal to the upper case letter height. However, the vertical spacing is equal to 0.75 times the upper case letter height in the street name, and is applied above the street name and below the cardinal direction. For example, for a level 1 street name of Main St of upper case/lower case legend using 16/12-inch letters, with a cardinal direction of WEST using 12-inch letters below, the vertical spacing is 12 inches, and is applied above the Main St and below the WEST.
4. For street names that utilize a cardinal direction following, the horizontal spacing is equal to the upper case letter height in the street name, and is applied before the street name and after the cardinal direction. The vertical spacing is unchanged, and is equal to 0.75 times the upper case letter height. For example, for a level 1 street name of Main St of upper case/lower case legend using 16/12-inch letters, with a cardinal direction of WEST using 12-inch letters following, the horizontal spacing is 16 inches, and is applied before the Main St and after the WEST.
5. For a distance message, the distance (numeral) is 1.5 times the height of the text. This is also true for action messages containing numerals (e.g., RIGHT 2 LANES, NEXT 3 EXITS, EXIT 13B). For these cases, the horizontal spacing is unchanged, and is equal to the capital letter height. However, the vertical spacing is equal to 0.75 times the capital letter height, but is applied

Example Sign Layout 1

Page 1 of 4 – Element Sizes



This example is for a level 1 sign using FHWA Standard Alphabets series E and E(M).

The element sizes are found in Table 1-2 in Section 1. The US 40 route shield is 36 x 36 inches. The cardinal direction WEST uses 12-inch high letters, with the initial letter 15 inches high. The destination Dayton uses 16-inch upper case letters and 12-inch lower case letters. The Type C arrow is 32 inches wide by 22 inches high.

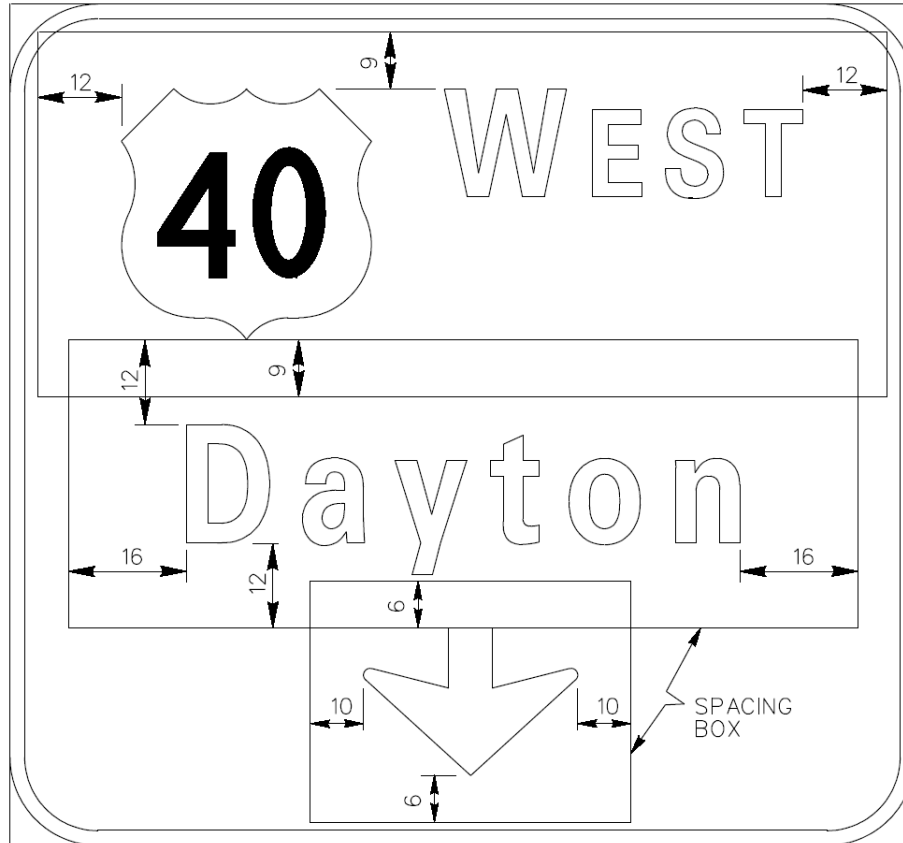
Route shields and cardinal directions are discussed in Section 3. The length of the cardinal direction WEST is 50.62 inches. The horizontal space between the US 40 route shield and the cardinal direction WEST is 12 inches.

Destinations are discussed in Section 5. The length of the destination Dayton is 85.30 inches.

Borders and corner radii are discussed in Section 10. The border is 2 inches wide. The corner radius is dependent on sign height. The sign height for many element configurations can be found in Section 12. In this case, the sign height is 10ft-0in, as shown on page 12.26. This gives a corner radius of 12 inches. (If the element configuration is not shown in Section 12, then the corner radius can be determined after the sign height is calculated.)

Example Sign Layout 1 (Continued)

Page 2 of 4 – Element Sizes



All dimension shown in inches unless otherwise noted.

This example is for a level 1 sign using FHWA Standard Alphabets Series E and E(M).

The US 40 route shield and cardinal direction WEST is applied to the sign as one element grouping. The vertical spacing is 9 inches, and is applied to the top and bottom of the element grouping. The horizontal spacing is 12 inches and is applied to both sides (see page 11.4).

The destination Dayton is applied to the sign as one element. The vertical spacing is 12 inches, and is applied to the top and bottom. Note that the bottom spacing is applied below the baseline of the legend, and is not affected by the extension of the “y” below the baseline. The horizontal spacing is 16 inches, and is applied to both sides (see page 11.7).

The Type C arrow is applied to the sign as one element. The vertical spacing is 6 inches, and is applied to the top and bottom. The horizontal spacing is 10 inches, and is applied to both sides (see page 11.12).